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Canada. Employment of Firemen
on Diesel Locomotives in Freight
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Pacific Railway, Royal Commission
on
Report.

REPORT

of the

Royal Commission on Employment of Firemen on
Diesel Locomotives in Freight and Yard Service
on the Canadian Pacific Railway

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Royal Commission on Employment of Firemen on
Diesel Locomotives in Freight and Yard Service
on the Canadian Pacific Railway

Ottawa, Queen's Printer, 1958.



REPORT

of the

Royal Commission on Employment of Women in
District Post-offices in Freight and Yard Service
on the Canadian Pacific Railway

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TO HIS EXCELLENCY THE GOVERNOR GENERAL IN COUNCIL:

May it please Your Excellency:

Pursuant to Order in Council, P.C. 1957-52 dated January 17, 1957, the undersigned were appointed Commissioners to inquire into and report upon all matters they deem necessary in order to answer, and to answer the following questions:

(a) Are firemen (or firemen (helpers)) required on diesel locomotives in freight and yard service of the Canadian Pacific Railway (including the Eastern, Prairie and Pacific regions and the Quebec Central and Dominion Atlantic Railways)?

(b) If not, what terms and conditions, which would be fair to the firemen, to those who use the Railway, to the Railway Company, and to its other employees, should be observed by the Railway for the purpose of protecting firemen now in its employ against the consequences of the loss of such employment and seniority therein?

(c) Should the provisions in the present agreements between the Railway Company and the Brotherhood concerning "arbitraries" and the "mountain differential" be maintained, dropped or modified, and if in the opinion of the Commission they should be modified, how and to what extent?

The Order in Council was passed upon a report from the Prime Minister stating that in order to provide for settlement of the dispute between the Canadian Pacific Railway and the Brotherhood of Locomotive Firemen and Enginemen which gave rise to a cessation of operations on the railway in January, 1957, it was desirable to appoint a Commission under Part I of The Inquiries Act to inquire into and report upon the unresolved issues in the dispute.

The dispute arose out of a proposal of the Company to the Brotherhood to dispense with the employment of firemen on diesel locomotives in freight and yard service and to abolish "arbitrary" and "mountain differential" payments, each of which will be hereafter dealt with separately.

In April, 1956, the dispute came to a head during negotiation of renewal agreements and in order to bring about a solution a conciliation board was established which gave its report in December of the same year. The Company accepted the findings and recommendations of the Board but the Brotherhood did not. Thereafter negotiations between the parties failed to bring about a solution and a work stoppage of some days' duration occurred in January, 1957.

Operations were resumed upon the parties agreeing to the establishment of this Commission to investigate the matters in dispute and report thereon, and to renegotiate those parts of their collective agreements in the light of the Commission's advisory report.

At a preliminary meeting of the Commission with representatives of the parties and their counsel on January 28th at Ottawa, counsel for the Brotherhood requested that sittings should not begin until a later date as he required a period for preparation. As a consequence the Commission commenced its hearings on March 4, 1957.

At the opening of hearings representations were made on behalf of the Canadian Labour Congress, supported by counsel for the Brotherhood, that sittings should be held at other places throughout the country. It was also intimated that the Congress would desire, at a subsequent date, to make representations with respect to the subject matters under inquiry. Counsel for the Brotherhood repeated a request made by him on January 28th that there should be a viewing by the Commission of certain operations across the country and over the mountain territory, as part of the evidence to be presented. These requests were opposed by counsel for the Company but the Commission, after consideration, agreed to comply.

Sittings were accordingly held at Toronto, Winnipeg, Calgary and Vancouver in addition to Ottawa. In the course of these hearings 119 witnesses were heard and observations were made by the Commission of operations over the road and in yards at all points where it was requested to do so. In the course of these observations, the members of the Commission rode many miles in the cabs of diesel locomotives, both in road and yard service. The hearings and observations were completed on October 22, 1957 and the argument of counsel, on November 5th.

The hearings took more time than expected because of the unavoidably repetitious nature of some parts of the evidence and because of the time required for observations in Canada and Europe. Moreover, the Commission did not observe strict rules of evidence in order that everything that could throw light on the matters referred to it might be elicited. This also took time.

QUESTION (A)

Are firemen required on diesel locomotives in yard and freight service of the Canadian Pacific Railway?

For the proper consideration of this first question some reference to historical background is necessary.

The Canadian Pacific purchased its first diesel electric locomotive in 1937. It was acquired for experimental purposes in yard service and was operated without a fireman or helper. It developed trouble and was disposed of some years later. The next purchase was

made in 1943 when five yard switchers were acquired. By 1948 the Company had a total of 71 diesels, all of which were employed in yard service in the larger terminals.

In 1943 the practice of operating without a fireman or helper which had hitherto obtained, was discontinued as a result of discussions between the Company and both the Brotherhood of Locomotive Firemen and Enginemen and the Brotherhood of Locomotive Engineers. Firemen were thereafter assigned to all yard diesels except one which operated in the Montreal terminal without a fireman until the collective agreement of December 21, 1948, when the "diesel rule", which will hereafter be set out, was included for the first time. Notice to amend the agreement in this respect had been given by the Brotherhood to the Company on November 15, 1947. A somewhat similar rule had been included in collective agreements in the United States in 1937 at a time when there were comparatively few diesel locomotives in operation, some of which were being operated without a fireman.

The Canadian Pacific took delivery of its first diesel road locomotive in February, 1949. By October of that year other road units were being received and employed in both freight and passenger service. In February of 1949 the Company took delivery of its last steam locomotive.

The diesel rule, so far as material, reads as follows:

Art. II.

- (f) A fireman or helper, taken from the seniority ranks of the firemen, shall be employed on all locomotives; provided that the term "locomotive" does not include any of the following:

(1) Diesel-electric, oil-electric, gas-electric, other internal combustion, steam-electric, or electric, of not more than 90,000 pounds weight on drivers in service performed by Yard Crews within designated switching limits.

(2) Electric car service operated in single or multiple units.

(3) Gasoline, diesel-electric, gas-electric, oil-electric or other rail motor cars, which are self-propelled units (sometimes handling additional cars) but distinguished from locomotives in having facilities for revenue lading or passengers in the motor car, except that rail motor cars installed subsequent to date of this agreement weighing more than 90,000 pounds on drivers, shall be a subject for negotiation between the Company and the Brotherhood of Locomotive Firemen and Enginemen as to whether such units shall be classified as locomotives.

When the agreement of December, 1948, was entered into the Company had no diesel locomotives of less than 90,000 pounds weight on drivers, which is the weight which is borne by the power-driven axles. It did, however, have a number of self-propelled rail motor

cars, known as Budd cars or dayliners. These were operated principally in passenger service with a crew of one man in the control cab whether operated singly or in multiple units.

The Company has since steadily increased its use of Budd cars and has also acquired some diesel yard engines of less than 90,000 pounds weight on drivers.

By 1956, 48% of the Company's freight, 71% of its passenger and 68% of its yard service had been dieselized. Substantial deliveries have since taken place and it is anticipated that by 1961 the railway will use only diesel to the exclusion of steam power.

As the Company gained experience with diesel locomotives, both in road and yard service, its operational officers concluded that firemen were unnecessary. This opinion had become sufficiently definite and system-wide that in 1954 it gave formal notice to the Brotherhood that it desired to amend the diesel rule accordingly. This proposal was not acceptable to the Brotherhood and was withdrawn by the Company which was not prepared at that time to press the matter to an ultimate conclusion. The Company, however, renewed it in 1956 as already stated.

For the same reasons the Canadian National Railways advanced a similar proposal in 1956. An officer of that railway gave evidence that the proposal was ultimately withdrawn because it did not, at that time, have its data in a sufficiently comprehensive and detailed form to press the issue. He stated, however, that this withdrawal had nothing to do with the safety or efficiency of the operations of the railway.

In 1956 the United States roads also had given notice of a proposal to change the diesel rule in agreements so that the use of firemen in passenger, as well as in freight and yard service, should be at the discretion of management. This proposal was, however, withdrawn, according to the evidence of the Chairman of the Western Carriers Conference Committee, as part of the settlement of a number of questions for a three-year contract. This witness stated that the questions of safety or efficiency in operation had nothing to do with this decision to withdraw.

Other experience on the continent in operating without firemen

There has already been some considerable experience in the operation of diesel and electric locomotives without a fireman on this continent, to some of which we will now refer. For present purposes the difference in the method by which electricity is produced, which constitutes the motive power of both the diesel and the electric locomotive, is immaterial.

The Company itself has, for some time, been operating electric locomotives without a fireman in freight and yard service in the area between Port Dover, Galt and Waterloo in Ontario, a distance of some 69 miles. Some of these locomotives are of 500 h.p. with a weight on drivers of 120,900 pounds. Others are of 800 h.p. with a weight on drivers of 142,280 pounds. While there is a five-man crew working with these locomotives consisting of a motorman, a trolleyman, a conductor and two trainmen, the sole function of the trolleyman is, as the name implies, to handle the trolley on the top of the locomotive. The trolley must be unhooked from the overhead wire and put up in the opposite direction when the locomotive is to be reversed. The trolleyman rides on the rear of the locomotive holding on to a rope attached to the trolley. In some instances a crew of only four men is used with these engines, one trainman being employed instead of two.

The Quebec, North Shore and Labrador Railway runs from Sept-Iles to the iron mines at Knobb Lake, a distance of some 357 miles. Throughout the extent of its line, there are no settlements with the exception of section camps; there is only one public crossing and some private ones. From May to November a weekly average of one passenger, three ordinary freight, and seventeen ore trains, the latter with loads up to 16,000 tons, are run. During the remainder of the year there is an average of only six trains per week. The switching at terminals is done not by the railway itself but by the Iron Ore Company using 750 h.p. and 1,500 h.p. diesel yard switchers. This railway does not employ fireman in any of its operations.

The Canadian Pacific operates a subsidiary, the Aroostook Valley Railway, between Presque Isle and Caribou in the State of Maine, a distance of 32 miles. This subsidiary conducts a freight operation on which local switching is performed. It employs three 44-ton diesel locomotives having a weight on drivers of less than 90,000 pounds. They have been in use since 1945 when they replaced electric locomotives which were operated by five-man crews, consisting of an engineman, a trolleyman, a conductor and two trainmen. Upon the substitution of diesel power the crew was reduced to four men, one trainman being dropped. The evidence shows that the operation of these locomotives without a fireman or helper was completely satisfactory.

The acquisition by the Canadian Pacific of diesel yard locomotives of less than 90,000 pounds weight on drivers to which we have referred was of two units in the early part of 1957. These were tested in the St. Luc yard at Montreal and one was later assigned to yard work at Yorkton, Saskatchewan, where it has been operating since June without a fireman. It does similar work to that done by the

more powerful locomotives, the only difference being that the latter can handle larger cuts of cars.

Beginning in September, 1934, the Canadian National Railways operated diesel yard switchers without firemen in the Montreal area and by 1943 had six of them in operation to its entire satisfaction. However, in that year, as a result of pressure from both the firemen's and engineers' unions the Company, in common with the Canadian Pacific as already stated, entered into agreements to employ firemen on these engines. An officer of the Canadian National testified that these agreements were entered into in wartime in the interests of industrial peace.

The Canadian National Railways have, of late years, been using in Prince Edward Island in yard service two diesel yard switchers of less than 90,000 pounds weight on drivers without firemen. These locomotives had originally been used in road service, at which time they had additional equipment which brought their weight over 90,000 pounds. Accordingly, firemen were required to be employed on them by virtue of the diesel rule. This Company has also more recently acquired other yard switchers within the excepted class, which it has been using without firemen at Kamloops and Kelowna, British Columbia, since November, 1956.

Furthermore, at St. Thomas, Ontario, the Wabash Railway in a joint operation with the Canadian National has, for some time, been conducting switching operations with a 44-ton yard switcher and no fireman is employed.

No evidence has been adduced to show that safety in the operation of either a diesel or an electric locomotive is in any way affected by the weight on drivers being more or less than 90,000 pounds and we can see no reason why that fact can have any bearing on the question.

Since January 1, 1949, the Canadian Pacific has, as already mentioned, continued to operate in passenger service, in single or multiple units up to seven, rail motor cars of the character described in the third exception to the diesel rule. From January 1, 1949, to February 28, 1956, these cars travelled a total of 4,247,301 miles and accident experience with them for that period has been as good as with other types of trains, namely, .47 accidents per 1,000,000 train miles. These rail cars, when operated singly, are of less than 90,000 pounds weight on drivers, but exceed that weight when in multiple. They run at speeds up to 100 m.p.h. and their use forms an increasing part of the operations of the railway.

The New York Central Railroad operates some 20 cars of the same character in passenger service on the main lines of its system

at speeds up to 80 m.p.h. When in single units no fireman is assigned, but under the diesel rule as it exists in the American agreements, one is required when the cars operate in multiple, as they then have an excess in weight on drivers over 90,000 pounds.

The New York Central has also, for over half a century, been using electric cars in multiple units up to 16 with an operator only in the leading cab, running out of the Grand Central Station in New York City to distances of 29 and 34 miles. These trains handle from 1,300 to 1,400 passengers each and follow one another normally at intervals of two minutes and at times at intervals of as little as one minute. There are from 500 to 600 of these trains every twenty-four hours operated at speeds up to 35 m.p.h. in the vicinity of the terminal and up to 60 m.p.h. outside of that area.

In our opinion all of this evidence points one way only with reference to the question presently under consideration.

Are firemen required for signal passing ?

Up to the present the crew in charge of a freight train has consisted of an engineer, a fireman, a conductor, a head end trainman and a rear end trainman. The conductor and rear end trainman ride in the caboose at the rear of the train while the engineer, the fireman and the head end trainman ride in the cab of the locomotive. Locomotives engaged in yard service are manned by an engineer and a fireman, their movement being directed by a yard crew composed of a foreman and two yardmen, the latter being sometimes referred to as the engine follower and the fieldman.

In road service the conductor is in charge of the train and in its switching operations he and the two trainmen correspond to the three-man crew in yard service. Movements of locomotives in both yard and road service are controlled by signals originating with members of the train or yard crew as the case may be. Signals are given by hand in the daytime and by lantern at night. Fusees are employed in unusual conditions such as fog.

One of the Brotherhood's submissions, made at the beginning of the sittings, was that the fireman "is there to receive and transmit signals when they can most safely and most efficiently be given on his side of the engine", i.e., on the left-hand side, as the engineer rides on the right-hand side of the cab and the fireman on the left.

It is common ground that the normal and preferable practice is for the engineer himself to see the hand signal whether given by the yardman or trainman with whom it originates or to whom it is relayed by one or more of the ground crew. As counsel for the

Brotherhood put it in one of his questions to a witness at an early stage of the hearings:

It is obvious to me as it is to you that if I am to tell that fellow (the engineer) what to do, then if I can it is much better that I tell him directly than through some intermediary.

The Company submits that if signals are given at any time through the medium of the fireman, they must be transmitted across the cab to the engineer, with the possibility that what the fireman says may not be heard or not be heard correctly by the engineer who may have his head out of the window, as may also the fireman.

In answer to this, however, the Brotherhood contends that the Company had condoned the practice of using the fireman as a signal passer and that the practice cannot therefore be hazardous. It is true that the earliest bulletin adduced in evidence which points out the proper practice to the employees is one dated August 16, 1956, applicable to the Toronto yards only, while the earliest system-wide bulletin is dated June 7, 1957. There is, however, a great deal of evidence, going back a considerable period, of training given to both train and yard crews in the proper practice.

We think that the most that can be said with respect to this contention is that, while the proper practice was at times departed from when the yard or train crews thought it would be more convenient or more expeditious, there is no doubt what the proper practice is and that the reasons for it were fully appreciated as well by the employees as by management.

Furthermore, the evidence establishes that any economy of time secured in any particular instance by a departure from the normal practice is not sufficient to be of major concern to the Company.

It was also contended by the Brotherhood, at the commencement of the hearings, that there were locations throughout the system where, by reason of local conditions, it was physically impossible for signals to be given thus directly to the engineer without using the fireman as a signal passer.

At the time the dispute between the parties arose and even at the date of the commencement of these hearings the Company had no diesel engines which could be operated by the engineman when sitting on either side of the cab. That situation, however, no longer obtains as the Company now has or proposes to put into operation dual control engines in all places where they are required by reason of particular physical features. There are only a few such locations and these are limited to the Toronto terminals.

The Company proposes in addition, if not required to retain firemen, to equip all its diesel freight trains operating on the north

main line west of Calgary, and on the south main line west of Fort Macleod with radio communication between the locomotive and the tail end.

As a result of on-the-spot observations by the Commission, together with representatives of the parties and their counsel, of actual movements at all points where the Brotherhood desired us to make them, it was conceded by the latter that they had been mistaken in their contention on this point and that, in fact, there were no locations, apart from those in the Toronto area to which we have just referred, where it is physically impossible to give signals to the engineer without using the fireman. In the words of counsel for the Brotherhood:

I have agreed on advice of my advisors, as we travelled across Canada, that in all instances it is physically possible to so organize or arrange the position of the men concerned as to give the signals to the engineer without the helper, and particularly it is possible, of course, with the aid of radio and dual control.

In our opinion the above statement was properly made and accords with the Commission's own observations.

The above admission of counsel was immediately followed by the statement that,

However, in the submission of the Brotherhood, again this does not meet the whole problem because, as I shall say again later, it would still leave in switching in the yards and in switching en route on the road one side of the engine, namely, the left side, and in the case of dual control at times the right side, without any eyes on the engine to watch that side.

We therefore pass to a consideration of the necessity of the presence of a fireman on a diesel locomotive from this point of view.

Lookout duty of firemen

It is common ground that on a steam locomotive the primary duty of the fireman has always been the production of steam, the engine's source of power. But such a fireman had other responsibilities which are recognized by the code of rules under which he operated and which may be classed under the general head of lookout duty. These included the obligation, so far as might be consistent with the primary one of producing power, of observing and reporting signals to the engineer, of reminding him of train orders, train schedules and train meets, of making running inspections of the train, of looking out at junction points, stations and highway crossings, and generally wherever a watch may be called for.

These duties, however, are equally the responsibility of the engineer and of the head end trainman whose position in the cab was and is on the left-hand side like that of the fireman. When the latter is engaged in firing, these duties necessarily fall to be performed by the engineer and the head end trainman exclusively. In the case of a locomotive hauling a passenger train, the engineer has to act alone at such times, as there is no third man riding in the cab of a locomotive engaged in passenger service.

A great deal of evidence was directed on the one side by the Company to establish that the duty devolving on the fireman of maintaining steam left him, particularly in the days of the hand-fired engine, with little time to do anything else, and on the part of the Brotherhood to show that the fireman could and did so regulate his work "on the deck" that he was able to be on the lookout whenever necessary, for example, at grade crossings and approaching fixed signals and at curves which provided suitable opportunity for running inspections.

We do not think we are called upon to decide this issue in the mathematical terms in which it was presented. The fireman did have his primary duty of producing and maintaining steam and he had, as did the head end trainman, these other duties as well. No doubt the time devoted to the primary duty varied with the individual and with the different models of hand-fired engines. In 1930, for example, numerous complaints were made by firemen with respect to the P-1 engine and instances were given of as much as 28 tons of coal having to be shovelled into such an engine in twelve hours.

As hand-fired engines have given way to stoker-fired and oil-burning ones, the time required for the performance of the fireman's primary responsibility has decreased. With the substitution of diesel power for steam and the development of the diesel locomotive to its present status of complete automatic power production, the former duty of the fireman with regard to power production has been eliminated. This is a matter no longer in dispute. In the words of counsel for the Brotherhood:

First, and of course the witnesses for the Brotherhood admitted this, the primary function which a fireman performed in steam was to produce power. That function was his alone. That function of course disappears on the diesel where the power is produced automatically and electrically by the engine itself in the various aspects which have been described, the details of which are not relevant to my submission.

When it is remembered, as we have already mentioned, that in passenger service there are but two men in the cab of a diesel locomotive, and that there can be no question but that they adequately perform these duties, it cannot be argued that a third man is necessary in the case of a freight locomotive.

It is claimed by the Brotherhood that firemen have been able to avert accidents to persons and property, or at least to lessen the damage from such accidents, by bringing to the attention of the engineer the fact of the presence of persons or vehicles approaching or being upon the railway right-of-way. Much of this evidence, however, was given on the assumption that neither the trainman nor engineman would have seen such persons or vehicles had not the fireman done so. This is an assumption which, of course, cannot be made and it was not borne out by the evidence in most of the instances related.

In the case of a train approaching a crossing, there is little the engineer can do to avert or lessen the consequences of an accident where a person or a vehicle enters upon the tracks when they should not do so unless it is moving at a slow rate of speed. Whatever the speed, it would, in our opinion, be just as logical to contend for the presence of a fourth or a fifth man on a freight locomotive in addition to the fireman, the trainman and engineman, as either of these additional men might see what the others, including the fireman, might not.

The form in which this submission of the Brotherhood was presented is significant. We quote:

The Brotherhood submits that the fact is that accidents occur precisely because someone may fail in his duty of lookout or care or observation, and therefore respectfully submits to the Commission that the only *foolproof* solution in so far as any human solution can be foolproof to the overriding need of the safety of the public and of railway employees is to have an employee—a fireman or helper—on the left side of the engine whose particular duty it is to be responsible for lookout precisely for such affairs on his side.

This argument is in our opinion not supportable. A duty to make operations foolproof cannot be imposed on a railway any more than upon the operators of trucks or buses.

In our opinion where an engine going over the road is manned by two men, in either freight or passenger service, one on each side of the cab, nothing more can reasonably be required of a railway for the protection of the unwary whether trespassers or not, when such a locomotive is running on its own right-of-way and is steered by a flange on a steel rail.

It is only on this continent that three men are to be found in the cab of a locomotive.

In yards, locomotives are operated under the control of the ground crew, it being their responsibility to ensure, by the giving or withholding of the appropriate signal, that the engine does not

move unless it can do so safely. It is equally the engineman's responsibility, even when moving under the control of a yardman's signal, to keep his own lookout and to stop if the signal disappears from view. Rule 7a of the Uniform Code of Operating Rules provides that:

Signals must be given from a point where they can be plainly seen and in such a manner that they cannot be misunderstood. If there is doubt as to the meaning of a signal, or for whom it is intended, it must be regarded as a stop signal. If signals disappear from view the movement must be stopped immediately, unless otherwise controlled.

"Otherwise controlled" in this context refers to fixed signals.

In approaching a switch, where the engine is not moving under the immediate control of a signal from a yardman, the engineer is required to stop if he cannot see that the switch is lined properly. Even when moving on the signal of a yardman the engineman is responsible, equally with the yardman, to know the position of the switch. The appropriate Rule, 104, states that:

A train or engine must not foul a track until switches connected with the movement are properly lined or in the case of spring switches the conflicting route is seen to be clear.

The diesel engine used in yards, the yard switcher, gives to the engineman a panoramic view of the track when it is moving in reverse, cab first. When the locomotive is moving forward and by reason of curvature of the track or otherwise, the engineman has not a sufficient view in the direction in which he is proceeding, a yardman may be placed on the steps on the front of the locomotive on the engineman's side for the purpose of giving him signals. When so placed the yardman has a better view than anyone in the cab could have.

It is not necessary at all times when a locomotive moves engine ahead in a yard that a member of the ground crew be on the front, for instance, where it is moving back and forth on a lead of tangent track and the switches into such track are closed. No other movement can then get into such a track and persons and vehicles in the neighbourhood not connected with the movement must guard themselves against contact with it. Yard crews working with different locomotives must in the discharge of their functions guard themselves from adjacent movements. The same is true of other railway personnel in yards who must expect that yard tracks may at any time be used for their normal purposes. As to other persons who may have business in a yard, it is provided by Rule 112 that:

Before coupling to or moving cars being loaded or unloaded all persons in or about such cars must be notified. Vehicles and loading or unloading devices must be clear.

Where the locomotive is pushing cars, whether it be moving cab or engine first, it is provided by Rule 103:

When cars are pushed by an engine (except when switching and making up trains in yards where there are no public crossings at grade, or where there are public crossings at grade adequately protected by gates or otherwise) a member of the crew must be on the leading car and in a position from which signals necessary to the movement can be properly given.

Whenever in any city, town or village, cars not headed by an engine or its tender are passing over or along a public road at grade which is not adequately protected by gates or otherwise, a member of the crew must be on the leading car to warn persons standing on, or crossing, or about to cross the track.

Where there is a public crossing at grade the Company also requires that an engine being operated without a fireman, either light or with cars, must carry a member of the train or ground crew in a position to observe the crossing and to give any necessary signal, where the view of the engineman is obscured. The trainman or yardman may be on the ground or on the engine or on any cars being handled.

It is worth noting that, with the increasing use of the diesel locomotive, steam and smoke have been to a large degree eliminated and that ultimately obstruction of view from this source will disappear with the retirement of the steam locomotive.

It may be useful to observe that there are at present a few locations on the system where the Company employs a ground crew of four. Even if the removal of the fireman should increase the number of such locations it could hardly be contended seriously that rather than employ the few additional yardmen required in such places, the whole 2,400 firemen now employed should be retained.

What we have said with respect to yards is equally applicable to the switching of a freight train en route, the train crew taking the place of the yard crew. We are, therefore, of the opinion that the presence of a fireman in either freight or yard service is not required from the standpoint of lookout.

Are firemen required for mechanical assistance ?

It is a further contention of the Brotherhood that firemen are useful on a diesel locomotive from this standpoint. It is pointed out that, from time to time in the past, the Company issued instructions requiring firemen to make certain inspections both before the engine commenced its work and during its operation, and to report on forms

provided for that purpose. It is also said that the mechanical examinations which firemen were required to pass covered such matters.

When diesel power was first introduced on the Canadian Pacific, difficulties in operation were anticipated because of weather conditions. Flying snow, low temperatures, traction and fuel supply were regarded as presenting possible problems. Moreover, the diesel locomotive was then equipped with a number of manually operated controls which gave rise to trouble from time to time. Other parts of the manual and electric systems, including those used in dynamic braking, also proved unreliable at times because of breakdowns in the cooling system. As the Company acquired experience in the operation of diesel power, however, difficulties experienced because of weather conditions were overcome and improvements in design and materials and the substitution of automatic for manual controls proceeded to the point where internal failure of locomotives became of rare occurrence.

In addition, the Company instituted a programme of preventive maintenance which involves the replacement, after arbitrarily established periods of use, of parts and components at certain base maintenance points on the system, where each locomotive is inspected at intervals of 6,000 miles and multiples thereof. After 240,000 miles the locomotive is sent to the main shops either at Ogden or Angus, where it is dismantled and reconditioned. This programme corresponds to that employed in the operation of air lines and to date it would seem to have been successful in preventing an increase of defects in diesel locomotives due to age.

In addition to maintenance at base points, train inspections and turn-around inspections are made by shop staffs located at terminals throughout the system. These employees are specially trained for their duties and are available on a twenty-four hour basis.

As a result of these maintenance methods, coupled with the improvement and development of the locomotive itself as already mentioned, the Company has removed from the engine crew any responsibility for maintenance or repair with the exception that in road service, in the event of engine failure, an engineman may perform certain minor maintenance work under the direction of a mechanical officer. Engine crews are not even supplied with any tools for the purpose of making repairs.

Moreover, a diesel electric locomotive is provided with fuel, water and oil by the shop staff at its point of departure, or where it works, and a visual inspection by the locomotive foreman takes place before it begins its operation. On steam locomotives, engine crews frequently

performed substantial maintenance work and by so doing contributed valuable service in keeping the trains moving but the diesel locomotive is an entirely different mechanism. Many of its parts are constructed to fine tolerances with delicate settings and the Company has now made it clear that it does not wish engine crews to have anything to do with its maintenance or to make any attempts to rectify any troubles beyond resetting protective devices or carrying out any specific instructions, which may be given by the mechanical officers of the Company.

As late as October, 1956, some firemen were continuing to patrol engine rooms and attempting to make adjustments, but in that month the Company issued a system-wide bulletin intended to make the situation clear to both enginemen and firemen. This bulletin specifically limited the duties of the fireman on a diesel unit in both freight and yard service to assisting the engineman and complying with the provisions of the operating rules. It was stated that it was to be clearly understood that the engineman, not the fireman, was responsible for the diesel locomotive in his care and that the fireman was not required to patrol, except as directed by the engineman. The bulletin further provided that when the unit had been checked by a shop staff the fireman was not required to perform mechanical checks or to see that the locomotive had been properly equipped and supplied with fuel, lubricating oil, water and sand.

There are in a diesel locomotive a number of protective devices which automatically activate an alarm when certain interruptions of its normal working occur. These devices may be reset a limited number of times under the direction of the engineer and, as some of them are not immediately at his hand, he may send the fireman to do the resetting. But the Company found it necessary on the division comprising Ottawa and the South Shore Line to Montreal to prohibit by bulletin in October, 1956, the engine crew from tampering with or adjusting these devices or entering electric cabinets, or from interfering with or adjusting power contacts or interlocks without instructions or supervision from division or district officers.

If there were no fireman, it might prove necessary for the engineer on occasion to bring his train to a stop in order that he might leave his seat to reset a protective device which had given an alarm. It is contended on the part of the Brotherhood that this would entail delay in the operation of the train and that firemen should be retained to avoid this. The evidence shows, however, that such occurrences are comparatively infrequent. By way of illustration, it may be pointed out that during all the travels of the Commission on the Canadian Pacific there was only one such alarm. The cause turned out to be a minor one. We are unable to find that stoppages due to

this cause would be of any material significance in the overall operation of the railway.

It cannot therefore be deduced from the fact that because, in the past, the Company required firemen on diesel locomotives to make certain inspections, they are now necessary for this purpose.

As to the second argument of the Brotherhood that the Company insisted on firemen passing the examinations above referred to, it cannot now be entertained as the Rule requiring such examinations has been withdrawn for revision by the Company.

It is also said that in emergencies such as the stopping of a train due to the breaking of a drawbar where it is necessary to send out immediately one of the trainmen to protect the rear and possibly, although not as frequently, another to protect the front end as well, a fireman is needed to assist in making repairs. It is contended that even if the conductor should be successful in obtaining the necessary protection by telephoning to a despatcher at some point along the line, thus permitting the trainmen to be recalled, nevertheless there would be delay which the presence of a fireman would obviate or reduce. It is argued that such delays would be increased if for any reason contact could not be made with the despatcher.

The evidence of the officers of the railway is, however, that such delays would be of infrequent occurrence and would not be, any more than in the circumstances referred to above, of any material significance in the overall operation of the railway. We think this is so and that it can be left to the railway to deal with as with other similar problems.

We are therefore of opinion that firemen are not required for the purpose of giving mechanical assistance.

Are firemen required for the relief of enginemen ?

It is next contended by the Brotherhood that the fireman is necessary to replace the engineer "in time of need", whether the need arises because of his becoming incapacitated from illness or fatigue, or because of the necessity of leaving his place at the controls for some temporary purpose.

Cases of sudden complete incapacity while on duty do occur but on the evidence before us, very infrequently. If the engineer be not actually operating his engine at the time, it is not a fireman who is required to take his place but a qualified engineer.

If the incapacity should occur on a road freight engine driven without a fireman, it would be brought to a stop either automatically

by the dead man control, if so equipped, or by the head-end trainman opening the emergency valve, which is on all such locomotives and is easy to use. Road delay from such instances would be rare and not of any appreciable importance in the overall operations of the railway.

Should the incapacity occur on a yard engine while moving about a yard, the engine, if equipped with a dead man control, would be brought to a stop within seconds. Even if not so equipped, the evidence adduced by the Company suggests that no damage is to be anticipated beyond what might occur in the case of a heavy coupling, as the speed of a yard engine is slow, 6 m.p.h or less.

All locomotives used in passenger service on the Canadian Pacific are equipped with dead man control and by the end of the present year it will also have been installed on all road freight engines. It is not the present intention of the Canadian Pacific to so equip its yard engines. In the opinion of all its operational officers who gave evidence, with one exception, the situation in yards does not render this necessary in view of the suggested possible damage involved. This was also the view of the vice-president in charge of operations of the Canadian National Railways. The excepted witness above referred to was the superintendent of the Toronto Terminals who said he would want it as an "extra precaution" should firemen be removed.

European practice in the case of yards is not uniform. In England and Germany where yard switchers are operated by an engineman alone, they are equipped with dead man control. In France, Switzerland and the Netherlands where there is also one-man operation, the yard locomotives are not so equipped.

After careful consideration we have come to the conclusion that yard locomotives on the Canadian Pacific should also be equipped with this device, as the sudden incapacity of an engineman might result in the fouling of a main track or other untoward eventualities.

In our opinion therefore, if firemen are removed, any locomotive not so equipped should carry an employee in a position to bring it to a stop in the event of the sudden incapacity of the engineman.

We do not think that any effect should be given to the contention that firemen should be retained on all road, freight and yard diesels because enginemen may find it necessary to leave the controls temporarily. If such a situation can arise on a freight locomotive it could equally occur on a passenger locomotive with the same result in each case, namely, that the train would have to be stopped, unless in the case of the passenger engine the fireman were also a qualified engineer, which would not necessarily be the case. If he were so qualified and stepped into the engineman's place at the controls the engine would be operating under one-man control during the engineer's absence.

If a need of the nature under discussion should arise in the case of a yard engine the situation would present no emergency features as stopping in yards is a frequent occurrence. We are therefore of opinion that firemen are not required for the relief of enginemen.

Conclusion

Accordingly, from the standpoint of the contentions put forward on behalf of the Brotherhood, taken individually or considered as a whole, which it contends would be the proper approach, we are of opinion that firemen are not required on diesel locomotives in either freight or yard service on the Canadian Pacific Railway. Their functions have either totally disappeared, as in the case of the production of power, mechanical assistance and inspection, or are a mere duplication of what is discharged by another or others, as in the case of the lookout functions performed by the head-end trainman and the engineman.

European observations

During the course of the hearings evidence was given both by the Company and the Brotherhood of operational practices on railways in England and in certain countries of continental Europe, where both diesel and electric engines in yard and freight service are employed, in varying circumstances, with fewer operational employees than on the Canadian Pacific. In view of this evidence and the fact that the North American continent affords more limited opportunities for observing such operations, the Commission considered it its duty to make observations at first hand in England, France, Switzerland and the Netherlands. This was accordingly done in company with representatives of the parties and their counsel and proved most valuable.

United Kingdom

In the United Kingdom, where the delivery of diesel units to the railways is increasing, firemen are not employed on such units in yard service but they are in passenger service. As yet there are no diesel locomotives in use in freight service. At the time of our visit the British Transport Commission was negotiating with the unions with respect to the removal of firemen on diesel units in both road freight and passenger service.

In the United Kingdom there has also been considerable experience in the operation of multiple-unit electric cars in passenger service. These are manned by an engineman alone in the cab of the

leading car, the only other employee on this type of train being a guard. These trains run at speeds up to 85 m.p.h.

France

In France, up to the present at least, diesel locomotives are used only in freight and yard service, electric ones being used in both passenger and freight service. Units employed in road freight or passenger service, if equipped with dead man control, are operated with an engineman alone in the cab, the balance of the train crew consisting of one or two trainmen as considered necessary; these may ride anywhere on the train and have no responsibility except at stations where switching occurs. If the locomotive is not equipped with dead man control, a fireman or trainman must ride in the cab while moving over the road. The only responsibility of the second man is to stop the train should the engineman become incapacitated.

In yard service, whether the locomotive be diesel or electric, there is no dead man control and the engineman is alone in the cab. The ground crew consists normally of three men but in special circumstances there may be an additional yardman employed. The yard crew is not attached to a particular locomotive as it is on the Canadian Pacific but, as we have observed, may work with more than one locomotive at a time.

Multiple units up to eight cars with diesel electric or electric power are used in passenger service in France, and when equipped with dead man control, the engineman is alone in the cab, the only additional crew member being a trainman. If there is no dead man control a trainman must be available in the compartment adjoining the engineman's cab in case the latter becomes incapacitated.

Switzerland

In Switzerland both diesel and electric locomotives are employed in yard service and the engineman is alone in the cab. As already stated, yard engines are not equipped with dead man control. Only electric locomotives are employed in freight and passenger service and these have dead man control. A fireman is required to be with the engineman only when the non-stop distance is over 60 kilometres and between midnight and 6:00 a.m., except in the case of trains arriving up to 1:30 a.m. and trains leaving after 3:30 a.m. provided the engineman has had 60 minutes rest. If the run does not exceed 90 minutes and the engineman has had at least 30 minutes rest, the train may operate with the engineman alone, even within the restricted hours mentioned above.

Netherlands

In the Netherlands all yard, freight and passenger locomotives, both diesel and electric, are operated by the engineman alone in the cab. Locomotives other than those in yards are equipped with dead man control.

In multiple-unit rail car operations, where the cars have been acquired in or since 1953, the train crew consists of the engineman and a ticket collector. On older equipment an unskilled labourer is carried in the engine room. A few fires occurred in this room of this type of equipment, of which the engineman in his cab was unaware, and for that reason the additional man is carried. His only duty is to pull a plug which stops the train if he observes smoke in the engine room.

Union submissions

As to these European railways and the observations made of them by this Commission in company with the parties, counsel for the Brotherhood quite frankly said that they were most significant and presented a serious obstacle to the submission of his clients.

He added, however, that the following facts lessened the value of the European operations as a basis of comparison with the Canadian Pacific: In the first place he submitted that the attitude existing between employer and employees is different in Europe than here, and he pointed to the fact that there is currently a discussion in Britain respecting the request of some workmen for a 40-hour week and in France for a 44-hour week, while on this continent 40 hours has been normal for some years.

He also referred to the fact that in Switzerland they use not only dead man control but what is known as automatic train control by which, if the engineman passes certain points on the track which cause a whistle in the cab to sound and does not press a button, the train will be brought automatically to a stop, and drew our attention to the fact that in Europe, and particularly in Switzerland and the Netherlands, the distances between stations in a great many instances may be as little as two or three miles. Again, with some exceptions, freight trains and cars are shorter and lighter than on the Canadian Pacific.

Counsel further submitted that a great deal of road freight movement is at night and that consequently yard work may be carried on at other times free from the pressures and interruptions of the arrival and departure of goods trains.

The latter fact was perhaps not completely established in evidence, but on the assumption it is so, we are of opinion, after giving full weight to it and to the other circumstances referred to, that operations as carried on by the European railways cannot be dismissed as irrelevant to the question before us. In our opinion they are very relevant and significant and constitute, as counsel for the Brotherhood very properly admitted, a serious obstacle to the position of his clients on the main question before us.

Moreover, it was not contended that the evidence supports a finding that the operations of European railways are less safe than those of the Canadian Pacific because of the absence of firemen. Nor was it suggested that they are less efficient.

Opinion of commission

After having, as already stated, observed these European operations at first hand, being present in the cabs of diesel and electric locomotives engaged in yard, freight and passenger service in busy yards and over roads subject to heavy traffic, we are of opinion that, notwithstanding the circumstances pointed out, there is an essential and basic similarity between European operations and those of the Canadian Pacific. Conditions in which European railways operate, which include snow and ice, heavy grades and sharp curvatures in France and Switzerland, corroborate the conclusion we have formed on the basis of the evidence and our observations in Canada, namely, as already expressed, that firemen are not required on diesel locomotives on the Canadian Pacific in either freight or yard service.

Other matters

A considerable number of enginemen gave evidence or presented petitions on behalf of members of local lodges at various points where sittings of the Commission were held, advocating the retention of firemen on the ground that their presence was necessary from the standpoint of lookout on the left side of the engine and that their removal would involve additional strain and responsibility on the enginemen.

A number of yardmen, trainmen and freight conductors took a similar position and added the further ground, namely, that if there were no firemen who could be used to pass signals, the number of occasions on which this class of employee would be required to "go high", that is, to go on the tops of cars in order to give or relay signals to the enginemen, would be increased. The hazard in performing this duty in unfavourable weather conditions, such as ice and snow, was stressed.

We do not in any way question the sincerity of these witnesses, but weight can only be given to their views to the degree to which the grounds upon which they are based are sound. It is moreover to be remembered that however long the experience of many of these witnesses, none of them had had any experience in operations carried on without a fireman.

We have already fully analyzed the question of lookout and for the reasons given, which we shall not repeat, do not think the fears expressed by these witnesses are soundly based.

As to "going high" on cars, this duty is, even now an every-day occurrence in the lives of yardmen and trainmen, as a number of the men stated. When, by reason of weather conditions it is unsafe to follow the practice, the number of cars in the cuts being moved requires to be reduced. Weather conditions of this nature are exceptional and the only result of taking smaller cuts is delay. When it becomes necessary such delays must be incurred.

It may be observed that the members of the classes of railway employee, above-mentioned, who appeared before the Commission presented their views solely as individuals. The unions to which they belonged made no representations to us and both the Brotherhood of Locomotive Engineers and the Brotherhood of Railroad Trainmen have agreements with the Quebec North Shore and Labrador Railway which, as already pointed out, carries on its diesel operations without firemen. The Brotherhood of Railroad Trainmen has also entered into agreements with the Canadian Pacific with respect to its electric locomotive operations in the Galt, Waterloo and Port Dover area and with respect to the diesel operations on the Aroostook Valley Railway. These last-mentioned agreements cover trainmen, enginemen and trolleyman.

Future source of supply of enginemen

The Company proposes to supply its future requirements of enginemen for freight and yard service from the ranks of its passenger firemen. The Brotherhood referred to the type of training given by certain of the European railways to qualify their employees as enginemen and questioned the adequacy of the proposal of the Canadian Pacific, while at the same time admitting that no insuperable problem to the Railway was involved. In this we agree and feel that no further comment with regard to the matter is necessary other than to say that it is not the policy of the Company to produce skilled craftsmen for the operation of diesel engines as in Europe. The skilled craftsmen are on the railway but they are in the maintenance shops.

For all of the above reasons, therefore, we are of opinion that firemen are not required on diesel locomotives in freight and yard service on the Canadian Pacific Railway and that the answer to Question (a) should be in the negative.

QUESTION (B)

What terms and conditions should be observed by the Company for the purpose of protecting firemen against the consequences of loss of such employment and seniority therein ?

THE Company, during the course of the hearings, made the following proposal which it is convenient to consider at this point:

I.—Firemen with a Seniority Date Prior to April 1st, 1953.

- (1) Such firemen will have the right to work in their turn as firemen, up to 3800 miles per month in freight service or six days per week in yard service to the extent that positions as firemen are available in their seniority territory on locomotives of a type to which firemen were previously assigned and in a class of service previously calling for the assignment of firemen.
- (2) Such firemen will have their existing seniority rights for promotion to enginemen in their turn preserved.

II.—Firemen with a Seniority Date Later Than March 31st, 1953, But Prior to April 1st, 1956.

- (1) Such firemen will be offered alternative employment as trainmen or yardmen to the extent that such work is available but their existing seniority rights as firemen shall be preserved.
- (2) Such firemen who hold themselves available for work will, as long as their seniority would have entitled them to positions as firemen on locomotives being operated in their seniority territory without a fireman, be assured pay at least the equivalent of five basic days' pay per week as yardmen, or, in the case of men assigned to road service, 3,000 miles per month at through freight rates as trainmen.

Provided that to determine the number of firemen to be assured of the minimum pay specified in the preceding paragraph, the total number of miles made in the previous month in each seniority territory by enginemen in all services, excluding passenger service and locomotives of a type to which firemen were not previously assigned, will be ascertained, road and yard miles to be shown separately, and the corresponding figure will be taken out showing mileage paid to locomotive firemen. The differences between the figures covering enginemen's mileage and those covering firemen's mileage for road and yard service respectively divided by 3800 for road service and the equivalent of six days

per week for yard service will give the maximum number of such firemen to be assured such minimum pay. Any excess miles in road and yard service respectively remaining after the computation is made will be added to the miles for the following month.

- (3) When there is a vacancy available such men will have the right to return in seniority order to work as firemen in passenger service with their original seniority as firemen. When such men are required to hold themselves available for work as firemen they will have the same rights as firemen with seniority date prior to April 1, 1953. Subject to their meeting the standard requirements, such men will also stand for promotion to engine-men in their turn.
- (4) Such firemen, failing to exercise their seniority to firemen's work in passenger service when available will be considered as having elected to retain seniority in the other class of service in which they are employed and will thereafter forfeit their seniority as firemen.
- (5) Alternative employment offered to such fireman will be within the seniority territory in which he holds his rights.
- (6) Firemen failing to accept alternative employment in train or yard service will lose their seniority rights as firemen and be deemed to have resigned from the service.

III.—Firemen with Seniority Date Later Later than March 31st, 1956.

Such men will be given preference over new applicants for employment with Canadian Pacific.

The proposal was drafted in a form appropriate for incorporation in a collective agreement. Accordingly a short exposition of the proposal is desirable.

It will be observed that it establishes three categories:

- I.—Firemen with a seniority date prior to April 1, 1953;
- II.—Firemen with a seniority date later than March 31, 1953, but prior to April 1, 1956; and
- III.—Firemen with a seniority date later than March 31, 1956.

Little need be said as to firemen in Category I for their present rights to employment as firemen are not affected.

On the footing of this proposal firemen in Category II will be removed from their jobs as firemen but will be offered alternative employment as trainmen or yardmen to the extent that such work is available, preserving to them their existing seniority rights as firemen. If they refuse employment as trainmen or yardmen they will be deemed to have resigned from the service. Likewise, if they fail to exercise their seniority as firemen when work is available on passenger service in their seniority district, they will thereby forfeit those rights.

Firemen in this category who hold themselves available for alternative employment in their seniority districts, whether they are actually assigned employment or not, are guaranteed pay for five basic days per week as yardmen and where they are assigned to road service, 3,000 miles per month at through freight rates as trainmen; provided that the number of firemen to be assured such guaranteed minimum pay is regulated by the formula set out in paragraph 2 of the Company's proposal dealing with this category. In other words they will receive yardmen's or trainmen's wages during any and all periods they would have been employed as firemen had firemen continued to be employed on diesel locomotives as at present.

Category III deals with men who entered the employment of the Company after March 31, 1956, by which time the Company had notified the Brotherhood that they intended to terminate the employment of firemen on diesel locomotives in freight and yard service. These men are offered preference of employment with the Company.

The following table shows the average number of firemen employed by the Canadian Pacific and its subsidiaries for the twelve-month period December 1955 to November 1956:

Passenger	449
Freight	1,690
Yard	788
	<hr/>
TOTAL	2,927

Of the total of 2,927 it will be observed that an average total of 2,478 were engaged in freight and yard service. Using these figures, there were some 1,900 firemen falling within Category I, some 477 within Category II and approximately 100 within Category III according to evidence adduced by the Company.

The Company estimates that removal of the firemen from diesel locomotives in freight and yard service would result in a current *annual* saving of \$5,746,000.00, and ultimately, when the system becomes completely dieselized, in an *annual* saving of \$11,581,000.00. In 1956 the net railway operating income of the Canadian Pacific was \$41,336,000.00. The Company further estimates that its proposal will cost in excess of \$38,000,000.00 because ten years will expire before employees who would be protected thereby are absorbed as passenger firemen or enginemen.

With regard to the merit of the Company's proposal, the Brotherhood had no criticism but made the suggestion that this was a matter which should be left for future negotiation between the Company and the Brotherhood. The Order in Council does not, however, leave us free to adopt such a course.

In our opinion the proposal from the standpoint of the firemen is a fair one. Had it not been made we might well not have gone so far to protect firemen from the consequences of loss of employment and seniority and we are unable to find any basis for recommending more generous terms. The proposal takes care in one way or another of all firemen who would have had reason to believe, at the time of their entering employment, that that occupation was a permanent one. Firemen employed since April 1, 1956, accepted employment with knowledge of its possible termination.

The Canadian Labour Congress, which is the central organization with which the Brotherhood is affiliated, submitted to us a brief which contains the following passage with reference to the Company's proposal:

The Congress does not wish to prejudice the future negotiations by commenting on these proposals now. It contents itself with submitting that, as a matter of social policy, employers contemplating a technological change affecting a whole craft should be guided by the principle that no one who has been employed in that craft for more than a year shall suffer loss of income.

It is apparent that the proposal recognizes this principle.

The efficient and economic operation of the railways of Canada is a matter of paramount importance to the country's economy. While the cost of the proposal is substantial and will in part at least be borne by the users of the railway, we feel that it is justified by its purpose. The proposal recognizes that the firemen affected have invested a substantial portion of their working years in acquiring skills which are no longer in demand. The change from steam to diesel power which will cause the displacement of the workers here in question, has also resulted in effecting very substantial savings to the Company in transportation and locomotive repair expenses. The cost of protecting the firemen, in this case, can therefore be properly set off against these savings. We accordingly adopt the Company's proposal as our answer to the second question referred to us.

QUESTION (C)

Should arbitraries and mountain differential be maintained, dropped or modified?

I. ARBITRARIES

Under the terms of the agreements between the Canadian Pacific and the Brotherhood, firemen are entitled to be paid for certain periods of time before the commencement and at the end of a shift in yard service and of a trip in road service. These periods, having

been arbitrarily fixed by agreement, doubtless derive their name from that fact. These payments are in addition to the payments for the yard shift or the road trip.

The periods vary between regions and types of locomotives as well as between freight, passenger and yard service. Others apply in certain specified circumstances only. Presumably, when first established, each period was considered as fairly representing the time which the parties regarded as necessary to perform the duties for which payment was to be made.

There are three kinds of these arbitraries, namely for

- (1) preparatory inspection before the locomotive is taken at the shop track or run-through point for a trip or the shop track or change-off point in a yard, and for final inspection after its arrival at such points;
- (2) hostling, i.e., for taking the locomotive out of the shop into the shop track, or returning it; and
- (3) when a work train is laid up at any other than a regular round-house staffed by maintenance men.

These will be discussed separately.

1. Preparatory and Final Arbitraries

The following arbitraries for preparatory and final inspections are provided for in the collective agreements of 1954:

	<i>Eastern Region</i>		<i>Prairie and Pacific Regions</i>	
	<i>Steam</i>	<i>Diesel</i>	<i>Steam</i>	<i>Diesel</i>
PASSENGER SERVICE	<i>Minutes</i>			
Shop Preparatory.....	30	30	30	30
Run-Through Preparatory.....	15	15	45	15
Shop Final Inspection.....	20	15	30	15
Run-Through Inspection.....	15	15	30	15
FREIGHT SERVICE				
Shop Preparatory.....	30	30	30	30
Run-Through Preparatory.....	15	15	45	15
Shop Final Inspection.....	20	15	30	15
Run-Through Inspection.....	15	15	30	15
YARD SERVICE				
Preparatory.....	15	15	30	15
Final Inspection.....	15	10	15	10

In freight and passenger road service, the “shop preparatory” arbitrary is paid for a period before the time ordered for the departure of the engine from the shop track. The fireman is required to appear for duty at the commencement of the period, sign the appearance book, read any bulletins posted and proceed to the locomotive, there to perform such duties, if any, as may be required of him in preparation for the trip to be made. The “run-through preparatory”

is paid to the fireman who relieves an incoming fireman when the locomotive continues on but the crew changes. The incoming fireman, completing his trip, is also paid an arbitrary called the "run-through final inspection". When a fireman leaves his locomotive at a shop track he is entitled to the arbitrary called the "shop final inspection". This period begins to run as soon as the locomotive arrives on that track.

In yard service, the term "preparatory arbitrary" is used to denote the period for which the fireman is paid for reporting for duty, signing the appearance book, reading bulletins, proceeding to the locomotive and there performing any duties required of him in preparation for his shift. He is also entitled to a "final inspection" arbitrary at the completion of his shift. This period begins to run when the locomotive is placed on the shop track or when the fireman is relieved at a regular change-off point where the engine is to continue working with another crew.

The Company contends that these arbitraries, by reason of improvements in steam and the substitution of diesel power, have ceased to be realistic and that their continued existence results in its having to pay for a great deal of time during which there is no work to be performed by the firemen. The Company therefore desires their abolition and the substitution of an obligation on its part to pay only for the time required for the performance of any work necessary.

The schedule above set out indicates many inconsistencies for which there appears no justification. Why, for example, should 45 minutes be allowed under the Prairie & Pacific agreement in the case of the steam run-through preparatory arbitrary in both freight and passenger service and 15 minutes only under the Eastern Regional agreement when the services, if any, required in either instance, are not affected by geography? The same question arises between the two areas with respect to the 10-minute difference in the steam shop final inspection arbitrary, as well as the 15-minute difference in the steam run-through final.

Furthermore, no explanation has been given why, in respect to a diesel locomotive, 30 minutes is specified for the shop preparatory arbitrary in both freight and passenger service, and 15 minutes only in the case of run-through. It is to be observed also that in the case of a run-through locomotive, the incoming fireman is allowed a final inspection arbitrary and the outgoing fireman a run-through preparatory arbitrary covering, in part at least, the same period of time. To that extent the Company pays twice. It may be added that at certain points where 15 minutes are allowed to each of these firemen, the train may stop for only 10 minutes.

These inconsistencies indicate that the payments made are not paid on the basis of work performed and we are of the opinion that they cannot be justified on that basis.

As the maintenance staffs, who usually work around the clock, are charged with the responsibility of preparing an engine for work and placing it on the shop tracks, there is generally nothing left for the firemen taking a diesel engine from a shop track to do but to make a check that such things as flags and lanterns have been put on the engine if he is so required by the engineman, whose primary responsibility this is. This takes practically no time. In the case of a steam engine, it is still necessary for the fireman to satisfy himself that the engine is properly equipped for service and it may be necessary at times for the fireman to bring up the steam pressure if the engine has been left standing for some time on the shop tracks.

In regard to a run-through engine, the outgoing crew take over directly from the incoming crew at the change-off point and where shop maintenance staffs are present they do the necessary servicing of the locomotive. Accordingly, the fireman, even on a hand-fired steam engine, would not have to build up his fires or his steam as he might have had to do on a locomotive left on a shop track. If the locomotive be a diesel, the fireman has no duty either going on or coming off it, beyond what may be delegated to him by the engineman for the latter's convenience.

A very considerable body of evidence was adduced on behalf of the Company, including numerous observations of the conduct of specific firemen while on duty, to establish that the firemen, on diesel engines at least, recognize themselves that they have no useful work to perform either at the commencement or termination of a shift in yard service or a trip in road service, and that generally speaking a fireman on a steam engine often has little to do at such times.

In yard work the working day is divided into three shifts of eight hours each. Nonetheless, each of the three firemen is entitled to be paid under the system of arbitraries not only for his eight-hour shift but in addition for 15 or 30 minutes preparatory inspection and 15 or 10 minutes final inspection, with the result that the Company pays the three firemen for twenty-five hours and fifteen minutes or more for the twenty-four hours.

On behalf of the Brotherhood some four witnesses testified as to certain road trips and yard shifts they had worked in which they said the time allowed by the preparatory and final arbitraries had been required for work actually performed. One of them, an engineer, also spoke of locomotives taken by him at shop tracks where the work of the shop staffs had been badly done. In this latter case,

however, the responsibility is that of the shop staff and not that of the fireman.

The overwhelming weight of evidence in our opinion establishes that the arbitraries do not represent work done, and the observed conduct of many firemen in getting on and getting off diesel engines substantiates this.

It was no doubt because this was appreciated by the representatives of the Brotherhood present at the hearings that its counsel stated to the Commission in the course of his final summing up that his client had authorized him to say it recognized that the bulletins issued in October and November, 1956, delineating the duties of enginemen and firemen on diesel locomotives had reduced the preparatory, and almost eliminated the final inspection on diesel engines, and that the present arbitraries, particularly with respect to diesels, although not necessarily limited to them, are not related to work done or work expected to be done. Counsel made it clear that he was not speaking of the time involved in booking in or out, walking to and from the engine or such matters as the reading of bulletins.

It has, however, been argued that irrespective of whether the arbitraries represent time required for the performance of actual work, they form part of the "wage packet" of firemen originally considered fair by both parties and that to interfere with them would amount to making a reduction in standard wages.

In our opinion there is no support for any contention that when the last agreements were signed in 1954 the parties agreed to consider the arbitrary payments as part of the earnings for a fireman's standard day's work. On the contrary, the very language of the agreements themselves shows that they did not. For example, articles 2(b)1 and 3(b)1 of the Eastern Region contract, covering preparatory work in passenger and freight services, provide that a fireman will be allowed thirty minutes at pro rata rates for such preparatory service when he "takes his engine from a shop track or other similar point where he performs *service* in getting the engine ready".

Moreover, even if it should be found, as we have been unable to find, that the arbitraries represent actual time required for work done, the employees cannot suffer if they are paid for the time required. On the other hand, if these periods do not represent actual time required, the Company suffers by being required to pay for time for which no value is received. The Brotherhood's contention on this head must, therefore, be rejected.

The evidence requires, in our opinion, a finding that arbitraries have become, on the whole, unrealistic and should be dropped and that firemen be paid from the moment they are ordered to report for duty until they book in at the completion of a shift or trip.

It may be that this conclusion could be put on an entirely different ground, namely, that so soon as a party ceases to be content, either to pay or to be paid on an arbitrary basis rather than on a basis of the time required to perform a necessary duty, he ought not to be held indefinitely to the old method, particularly when the substratum of the original agreement has been eroded by changes of such a radical nature as those which have occurred on the Railway, following upon the improvement in the development of steam power and the substitution for the latter of the modern diesel locomotive. Arbitrary arrangements such as those here in question can perhaps remain in force in the face of such changes only so long as both parties desire them, otherwise they could well be without consideration on the one side or the other. However, we do not have to base our decision on this ground in view of our previous conclusion.

The Brotherhood has contended that, in any event, adjustment of the situation should be left to the parties to negotiate and settle between themselves. We are, however, unable to accede to this contention as we are required by the Order in Council to express our opinion which is that these arbitraries should be dropped and the agreements should contain a provision for payment for services rendered.

2. Hostling Arbitraries

Hostling consists in taking an engine out of a shop or round-house and placing it on a shop track, or returning it. The agreements provide for an arbitrary of 15 minutes in the East and 30 minutes in the West to be paid to firemen performing this service, with the proviso that if a longer time be required, actual time will be paid for.

Again, there is no explanation for the regional difference in the periods set out in the schedule, but in any event, the principle involved is the same as in the case of the other arbitraries already discussed and there is no reason for arriving at a different conclusion. We therefore think the hostling arbitraries should be dropped and the men be paid on the basis of the time actually required for performance of this service.

3. Work-Train Arbitrary

When a work-train is laid up at other than a round-house where there are regular shop men, the fireman is allowed, after the laying up, one hour at the pro rata rate "to cover necessary repairs and get engine ready", except when he is kept on duty in any event to watch the engine, in which case he is paid for the entire time he is on duty. The one hour arbitrary applies whether the locomotive is steam or diesel. If the latter, there is nothing for the fireman to do. In the

case of a steam engine, he may have some duties to perform as already discussed.

In our opinion the same principle applies as in the case of the other arbitraries. We think this arbitrary also should be dropped and the men be paid for time required to perform necessary service.

II. MOUNTAIN DIFFERENTIAL

Under the terms of the agreement for the Prairie & Pacific Regions, firemen in passenger service are paid an additional 82 cents and in freight service 75 cents per day of 100 miles over the standard rate in effect throughout the system generally, when working on those portions of the railway system designated as mountain territory, all but 5 miles of a total mileage of 473.4 being in British Columbia, the remainder being in Alberta. This additional rate is called the "mountain differential". When working on the remaining portion of the system within British Columbia, amounting to 1,483.8 miles, called valley territory, firemen are paid a "valley differential" of 9 cents per day of 100 miles over the standard rate. The most important mileage of track within the mountain territory lies between Lake Louise in Alberta and Revelstoke in British Columbia.

The evidence indicates that historically the mountain differential was based on three grounds, namely, that

- (1) the work of a fireman on steam locomotives in mountain territory was more arduous;
- (2) greater hazards attended the work of firemen in mountain territory; and
- (3) owing to slower speeds in mountain territory the firemen required more hours per day to equal the earnings made by firemen elsewhere.

The evidence shows that the arduous character of a fireman's duties imposed by mountain grades has now entirely disappeared with the virtual dieselization of the entire Pacific Region. When the railway was first constructed there were many severe grades, the severest being between Stephen Station at the Continental Divide and Field, 6 miles west as the crow flies but 11½ miles by track, Field being 1,265 feet lower in altitude. The grade eastward was originally 4.5% but by construction of the notable spiral tunnels and a diversion of 8.2 miles of line, it was reduced to 2.2%. Other substantial relocations of track have also been made, materially reducing grades on other portions of the line. Notwithstanding these changes, it is common ground that the hand-firing of steam engines in mountain territory was considerably more arduous on mountain grades than elsewhere and the same was true of the duties of firemen on stoker or oil-fired steam engines but to a lesser extent.

For present purposes it may be assumed that at one time unusual hazards attended operations in mountain territory. The Company's submission is that these hazards have virtually disappeared and that train operation in mountain territory does not differ in this respect from valley territory. Snow, rock and mud slides under inclement weather conditions occur in both mountain and valley, although slides do not appear to be as frequent in either as they were twenty-five years ago.

Mountain territory is also now equipped with a block signal system; portions of track have been relocated to avoid slide hazards, and slide detector fences operating block signals have been erected. Where snowfall is heavy in mountain territory there is now in operation a daily snow removal service which materially alleviates the hardships experienced with snow in earlier years. It was also shown that even in valley territory, as for example, between Spence's Bridge and North Bend, snowfalls of one to three feet have on occasion been experienced. Moreover, for increased safety of operation, regular track patrols are maintained in British Columbia, there being at present two patrols on the mountain subdivision, five on the Thompson subdivision and nine on the Cascade, the latter two being in valley territory. In our opinion the hazards prevailing in both mountain and valley territories do not substantially differ.

The Brotherhood placed its greatest emphasis on the existence of lower speeds in the mountain territory and their effect on earnings. Its counsel requested the Company to furnish information as to the average speeds of all freight trains, except wayfreights, for a typical period on a selected number of subdivisions and the following table was submitted:

<i>Subdivision</i>	<i>Trains Operated Between</i>	<i>Mileage</i>	<i>Average Speed in Miles Per Hour of All Freight Trains</i>
Sherbrooke- Megantic	Farnham-Megantic	131.9	21.3
Chalk River	Smith Falls-Chalk River	115.3	21.5
Galt	Toronto-London	103.5	15.4
MacTier	W. Toronto-MacTier	126.9	18.1
Broadview	Brandon-Broadview	130.9	24.6
Swift Current	Moose Jaw-Swift Current	108.1	27.5
Mountain	Revelstoke-Field	125.7	17.5
Thompson	Kamloops-North Bend	121.5	22.6

This table was most strongly relied on in argument by counsel for the Brotherhood who stressed that the average speed on the Thompson subdivision was more than 5 miles faster than in mountain territory and contended that speeds elsewhere throughout the system should not be compared, i.e., that comparisons should be limited as between mountain and valley territory in British Columbia.

In will be noted, however, that the average speed in the Galt sub-division, in eastern Canada, is some two miles slower than in mountain territory and that speeds vary materially throughout the system. It was not, however, suggested that there should be a schedule of differentials based on variations in speeds. If the average speeds in the Galt and MacTier subdivisions be compared to speeds in mountain territory, it would seem that there is little justification for a differential on the basis of speed alone and we see no reason why such a comparison is invalid for the purposes of the question before us.

Moreover, if it be the fact that one of the reasons for the establishment of the mountain differential was that the firemen had to work longer than their brethren elsewhere in order to make comparable earnings, then any element which has tended to remove such disparity must be a relevant consideration with respect to the continuance or otherwise of the mountain differential. A fireman's remuneration is in part measured by the weight on drivers of the power employed. One of the largest steam locomotives, a T-1, has a weight on drivers of 350,000 to 400,000 pounds. Diesel power consisting of three units has a weight on drivers of 750,000 to 800,000 pounds.

The following table illustrates the comparative earnings of firemen as between steam and diesel power in mountain and valley territory:

<i>Class of Power</i>	<i>Rate per 100 M. inc. Mtn. Diff.</i>	<i>Rate per 100 M. inc. Valley Diff.</i>	<i>Monthly Mileage</i>	<i>Earnings inc. Mtn. Diff.</i>	<i>Earnings inc. Valley Diff.</i>
PASSENGER SERVICE—NORTH MAIN LINE					
STEAM					
T-1 Engine 350,000–400,000 lbs.....	\$12.03	—	4,800	\$577.44	—
DIESEL					
3 units (Road Switcher) 750,000–800,000 lbs.....	\$12.79	\$12.10	4,800	\$613.92	\$580.80
FREIGHT SERVICE—NORTH MAIN LINE					
STEAM					
T-1 Engine 350,000–400,000 lbs.....	\$13.40	—	3,800	\$509.20	—
DIESEL					
4 units (Road Switcher) 1,000,000–1,050,000 lbs.....	\$15.89	\$15.26	3,800	\$603.82	\$579.88
3 units 750,000–800,000 lbs.....	\$14.93	\$14.30	3,800	\$567.34	\$543.40
2 units 500,000–550,000 lbs.....	\$13.98	\$13.35	3,800	\$531.24	\$507.30

It will be noted that on a monthly mileage of 4,800 in passenger service the remuneration for road miles on a T-1 steam locomotive would be \$577.44 at the mountain differential rate. With a three-unit diesel consist it would total \$613.92 which would be reduced

to \$580.80 at the valley rate, a few dollars more than the fireman would have received at the mountain rate before the discontinuance of steam power.

In freight service the fireman's remuneration on the basis of 3,800 miles per month would amount to \$509.20 on T-1 power in mountain territory while on a four-unit diesel consist his remuneration would be \$603.82 on the same territory. In valley territory it would be \$579.88 which is \$70.68 per month greater than his steam earnings because he is working on diesel power.

It will also be noted that with a three-unit consist in freight service the fireman also benefits materially. When only two diesel units are used the fireman would lose the sum of \$2.00 monthly as against working on steam but counsel for the Brotherhood, in the course of argument, admitted that the overwhelming majority of locomotives in mountain territory were operated in consists of three and four units. While in the case of the south main line a passenger fireman would earn some \$10.00 less at the valley rate on a two-unit diesel than on a P-1 steam engine, the great bulk of the traffic is carried on the north line.

In the result, taking all the above considerations into account, we are of the view that the existing agreement between the Company and the Brotherhood should be modified so as to abolish the mountain differential and substitute for it the valley one.

As will have been observed we have, in the course of this report, made use, as a matter of convenience, of a number of admissions made by counsel for the Brotherhood. All of these covered matters which the evidence rendered so obvious that they would, in any event, have required findings to the same effect to be made by this Commission, and we desire to commend both counsel and client for the frank way in which these matters were faced. Both parties were represented by very able counsel, who, by the completeness of the evidence adduced and the very full arguments addressed to us, greatly assisted in the discharge of the duty imposed upon us by the Order in Council.

SUMMARY

Our answers to the questions referred to us are therefore as follows:

QUESTION (A)

Are firemen (or firemen (helpers)) required on diesel locomotives in freight and yard service of the Canadian Pacific Railways (including the Eastern, Prairie and Pacific regions and the Quebec Central and Dominion Atlantic Railways)?

ANSWER: No.

QUESTION (B)

If not, what terms and conditions, which would be fair to the firemen, to those who use the Railway, to the Railway Company, and to its other employees, should be observed by the Railway for the purpose of protecting firemen now in its employ against the consequences of the loss of such employment and seniority therein?

ANSWER: The terms and conditions of the proposal made by the Company as set out in our earlier discussion of this question should be adopted.

QUESTION (C)

Should the provisions in the present agreements between the Railway Company and the Brotherhood concerning "arbitrariness" and the "mountain differential" be maintained, dropped or modified, and if in the opinion of the Commission they should be modified, how and to what extent?

ANSWER: (1) The provisions in the present agreements concerning "arbitrariness" should be dropped and the agreements amended to provide for payment by the Company for the time required for the performance of actual services.

(2) The "mountain differential" should be dropped and the "valley differential" substituted therefor.

Ottawa, December 18, 1957.

R. L. KELLOCK
C. C. McLAURIN
JEAN MARTINEAU

APPENDIX

P.C. 1957-52

Certified to be a true copy of a Minute of a Meeting of the Privy Council, approved by His Excellency the Governor General on the 17th January, 1957.

The Committee of the Privy Council have had before them a report from the Prime Minister stating that in order to provide for settlement of the dispute between the Canadian Pacific Railway and the Brotherhood of Locomotive Firemen and Enginemen, which gave rise to a cessation of operations on the railway in January, 1957, it is desirable to appoint a Commission under Part I of the Inquiries Act to inquire into and report upon the unresolved issues in the dispute.

The Committee, therefore, on the recommendation of the Prime Minister, advise:

1. That:

The Honourable Mr. Justice Roy Lindsay Kellock, Puisne Judge of the Supreme Court of Canada,

The Honourable Mr. Justice Campbell C. McLaurin, Chief Justice of the Trial Division of the Supreme Court of Alberta, and

The Honourable Mr. Justice Jean Martineau, Puisne Judge of the Court of Queen's Bench for Quebec

be appointed Commissioners under Part I of the Inquiries Act to inquire into and report upon all matters they deem necessary in order to answer, and to answer the following questions:

- (a) Are firemen (or firemen (helpers)) required on diesel locomotives in freight and yard service of the Canadian Pacific Railway (including the Eastern, Prairie and Pacific regions and the Quebec Central and Dominion Atlantic Railways)?
- (b) If not, what terms and conditions, which would be fair to the firemen, to those who use the Railway, to the Railway Company, and to its other employees, should be observed by the Railway for the purpose of protecting firemen now in its employ against the consequences of the loss of such employment and seniority therein?
- (c) Should the provisions in the present agreements between the Railway Company and the Brotherhood concerning "arbitrariness" and the "mountain differential" be maintained, dropped or modified, and if in the opinion of the Commission they should be modified, how and to what extent?

2. That the Honourable Mr. Justice Kellock be Chairman of the Commission;

3. That the Commissioners be authorized to exercise all the powers conferred upon them by section II of the Inquiries Act;

4. That the Commissioners be authorized to secure technical advice and assistance from the members and staff of the Board of Transport Commissioners and from any other board, commission, agency or department of the government of Canada;

5. That the Commissioners be authorized to engage the services of such counsel, staff and technical advisers as they may require at rates of remuneration and re-imbursement to be approved by the Treasury Board;

6. That the Commissioners adopt such procedure and methods as they may from time to time deem expedient for the proper conduct of the inquiry and sit at such times and places as they may decide from time to time; and

7. That the Commissioners report to the Governor in Council.

(signed) R. B. BRYCE,
Clerk of the Privy Council

29.10.1958

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